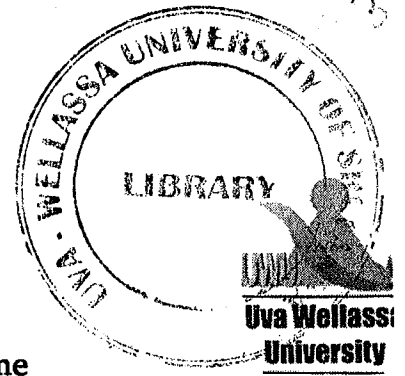




Uva Wellassa University
Faculty of Science and Technology
Science and Technology Degree Programme
3 Year 2nd SEMESTER EXAMINATION-August/September, 2014

SCT 425 -2 Biomass Conversion

No. of questions : 04
Answer All questions
Time allocation : 02 hours
Marks allocation : 100

1. a) Discuss the importance of structure and composition of biomass on the biofuel production.
b) List desired properties of ideal energy crops. (25 mark)

2. a) Examine the key features for the effective pretreatment of lignocellulosic biomass.
b) Examine major obstacles in introducing biomass as a source of fuel. (25 mark)

3. Briefly discuss the following.
a) Potential of microalgal biodiesel
b) Transesterification
c) Cellulose/lignin ratio
d) Steam pretreatment (20 mark)

4. a) Provide an explanation for the "sweetness" of saccharides.
b) "Processing of low cost oils and fats is that they often contain large amounts of free fatty acids that cannot be converted to biodiesel using alkaline catalyst" Analyse the statement. (30 mark)